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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-44. (Cancelled).

45. (Previously presented) A composition, comprising:

a salt of a rare earth metal;

a salt of an alkaline earth metal; and

a carboxylate salt of copper,

wherein the composition is in the form of a solution capable of being deposited onto a biaxially textured surface or a single crystal surface and processed in less than about five hours to form a barium fluoride-containing coating that is a precursor for a superconductor film, the superconductor film having a thickness of at least about 0.5 micrometer and a critical current density of at least about $1x10^6$ Amperes per square centimeter, and the superconductor film comprising the rare earth metal, the alkaline earth metal and copper.

- 46. (Original) The composition of claim 45, wherein the alkaline earth metal salt comprises barium trifluoroacetate.
- 47. (Original) The composition of claim 46, wherein the rare earth metal salt comprises a salt selected from the group consisting of halogenated yttrium acetates and nonhalogenated yttrium acetates.
- 48. (Original) The composition of claim 45, further comprising a Lewis base.

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49. (Original) The composition of claim 48, wherein the alkaline earth metal salt comprises barium trifluoroacetate.

50. (Original) The composition of claim 49, wherein the rare earth metal salt comprises a salt selected from the group consisting of halogenated yttrium acetates and nonhalogenated yttrium acetates.

51-58. (Cancelled).

59. (Previously presented) A composition, comprising:

a Lewis base;

a salt of a rare earth metal;

a salt of an alkaline earth metal; and

a salt of a transition metal,

wherein the composition is in the form of a solution capable of being deposited onto a biaxially textured surface or a single crystal surface and processed in less than about five hours to form a barium fluoride-containing coating that is a precursor for a superconductor film, the superconductor film having a thickness of at least about 0.5 micrometer and a critical current density of at least about 1×10^6 Amperes per square centimeter, and the superconductor film comprising the rare earth metal, the alkaline earth metal and copper.

- 60. (Original) The composition of claim 59, wherein the Lewis base comprises a nitrogen-containing compound.
- 61. (Original) The composition of claim 60, wherein the nitrogen-containing compound is selected from the group consisting of ammonia and amines.
- 62. (Original) The composition of claim 60, wherein the nitrogen-containing compound comprises an amine having a formula selected from the group consisting of CH₃CN, C₅H₅N and

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 $R_1R_2R_3N$, wherein each of R_1 , R_2 and R_3 are independently selected from the group consisting of H, a straight chained alkyl group, a branched alkyl group, an aliphatic alkyl group and a substituted alkyl group.

- 63. (Cancelled).
- 64. (Original) The composition of claim 59, wherein the transition metal salt comprises a carboxylate salt.
- 65. (Original) The composition of claim 59, wherein the transition metal salt comprises $Cu(O_2CC_2H_5)_2$.

66-84. (Cancelled)

- 85. (Original) The composition of claim 45, wherein the carboxylate salt of copper comprises a propionate salt of copper.
- 86. (Cancelled).
- 87. (Original) The composition of claim 59, wherein the salt of the transition metal comprises a carboxylate salt of the transition metal.
- 88. (Cancelled).
- 89. (Previously presented) The composition of claim 59, wherein the transition metal salt has a formula selected from the group consisting of M"(CXX'X"-CO(CH)_aCO-CX""X""X""")(CX"""X"""X"""-CO(CH)_bCO-CX""""X"""X""""), M"(O₂C-(CH₂)_n-CXX'X") (O₂C-(CH₂)_m-CX""X"""X""") and M"(OR)₂, wherein M" is the transition metal, a is an integer having a value of at least one and at most five, b is an integer having a value of at least

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- 90. (Previously presented) The composition of claim 45, wherein defects contained within the fluorine-containing coating comprise less than about 20 percent of any volume element of the fluorine-containing coating defined by a projection of one square centimeter of a surface of the fluorine-containing coating.
- 91. (Previously presented) The composition of claim 45, wherein defects contained within the fluorine-containing coating comprise less than about 10 percent of any volume element of the fluorine-containing coating defined by a projection of one square centimeter of a surface of the fluorine-containing coating.
- 92. (Previously presented) The composition of claim 45, wherein defects contained within the fluorine-containing coating comprise less than about five percent of any volume element of the fluorine-containing coating defined by a projection of one square centimeter of a surface of the fluorine-containing coating.
- 93. (Previously presented) The composition of claim 59, wherein defects contained within the fluorine-containing coating comprise less than about 20 percent of any volume element of the fluorine-containing coating defined by a projection of one square centimeter of a surface of the fluorine-containing coating.
- 94. (Previously presented) The composition of claim 59, wherein defects contained within the fluorine-containing coating comprise less than about 10 percent of any volume element of the

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fluorine-containing coating defined by a projection of one square centimeter of a surface of the fluorine-containing coating.

95. (Previously presented) The composition of claim 59, wherein defects contained within the fluorine-containing coating comprise less than about five percent of any volume element of the fluorine-containing coating defined by a projection of one square centimeter of a surface of the fluorine-containing coating.

96. (New) The composition of claim 89, wherein defects contained within the fluorine-containing coating comprise less than about 20 percent of any volume element of the fluorine-containing coating defined by a projection of one square centimeter of a surface of the fluorine-containing coating.